

**Larry Kyle**

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**From:** "Larry Kyle" <lkyle@psipl.com>  
**To:** <jenkinsuen@netvigator.com>  
**Sent:** Friday, July 08, 2005 5:36 PM  
**Attach:** 8019p18.jdec.pdf; 8019p18.jpoa.pdf; 8019p18.jenasg.doc; 8019p4.app.doc  
**Subject:** Peak patent application - SCREW-IN POST SUPPORT

Dear Jenkin,

You will recall that some time ago Peak filed a PCT patent application entitled the SCREW-IN POST SUPPORT. This invention was invented by you and Simon Walker. On October 10, 2004, you sent an email to various people at Peak indicating that you would not sign any documents in relation to the application as you did not wish to take any legal liability and responsibility.

The deadline to enter the national phase for the U.S. has just passed. When filing an application in the U.S. a Declaration and Oath must be signed by each inventor stating that they are an inventor of the invention that is being applied for. I have therefore attached a copy of a Declaration which I kindly ask that you sign and return to me. I have also attached a copy of the application for your ease of reference. In addition, I have also attached a copy of an assignment assigning your rights in the invention to Peak. Signing these documents will not cause you to assume any liability in relation to the applications.

I would like to thank you in advance for taking the time to consider and respond to this email and to sign the required documents.

If you will not sign the attached documents, I ask that you kindly reply via email firmly stating your refusal to take part in the application.

Best regards,

C. Larry Kyle

Paul Smith Intellectual Property Law  
Agents for Peak Innovations Inc.

PAUL SMITH INTELLECTUAL PROPERTY LAW  
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7/8/2005

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**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**Declaration  
Submitted  
With Initial  
Filing

OR

Declaration  
Submitted after Initial  
Filing (surcharge  
(37 CFR 1.16 (e))  
required)Attorney Docket  
Number

8019p18

First Named Inventor

Walker, Simon

**COMPLETE IF KNOWN**

Application Number

Not Yet Assigned

Filing Date

Not Yet Assigned

Art Unit

Not Yet Assigned

Examiner Name

Not Yet Assigned

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**SCREW-IN POST SUPPORT**

(Title of the Invention)

the specification of which



is attached hereto

OR



was filed on (MM/DD/YYYY)

01/08/2003

as United States Application Number or PCT International

Application Number

PCT/CA03/00021

and was amended on (MM/DD/YYYY)

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT International filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

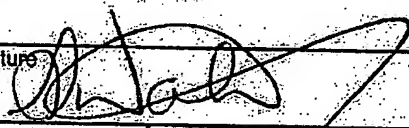
☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.83. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

**DECLARATION — Utility or Design Patent Application**

Direct all correspondence to:	<input checked="" type="checkbox"/> The address associated with Customer Number: <span style="border: 1px solid black; padding: 2px 20px;">24320</span>	OR	<input type="checkbox"/> Correspondence address below
Name:			
Address:			
City:		State:	ZIP:
Country:	Telephone:	Email:	
<small>I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.</small>			
NAME OF SOLE OR FIRST INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor.	
Given Name (first and middle (if any))		Family Name or Surname	
Simon		Walker	
Inventor's Signature: 		Date: JUL 04 2005	
Residence: City	State	Country	Citizenship
Delta	British Columbia	Canada	Canadian
Mailing Address			
4826 13th Avenue			
City	State	Zip	Country
Delta	British Columbia	V4M 2B8	Canadian
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor.	
Given Name (first and middle (if any))		Family Name or Surname	
Jenkin		Suen	
Inventor's Signature:		Date:	
Residence: City	State	Country	Citizenship
Richmond	British Columbia	Canada	Chinese
Mailing Address			
8745 Saunders Road			
City	State	Zip	Country
Richmond	British Columbia	V7A 2A6	Canada
<input type="checkbox"/> Additional inventors or a legal representative are being named on the supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.			

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# **POWER OF ATTORNEY and CORRESPONDENCE ADDRESS INDICATION FORM**

<b>Application Number</b>	Not Yet Assigned
<b>Filing Date</b>	Not Yet Assigned
<b>First Named Inventor</b>	Walker, Simon
<b>Title</b>	Screw-In Post Support
<b>Art Unit</b>	Not Yet Assigned
<b>Examiner Name</b>	Not Yet Assigned
<b>Attorney Docket Number</b>	8019p18

I hereby revoke all previous powers of attorney given in the above-identified application.

I hereby appoint:

☒ Practitioners associated with the Customer Number:

24320

OR

☐ Practitioner(s) named below:

Name	Registration Number

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

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OR

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OR

☐ Firm or Individual Name

Address

City

State

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Country

Telephone

Email

I am the:

☒ Applicant/Inventor.

☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

## **SIGNATURE of Applicant or Assignee of Record**

Signature		Date	
Name	Jenkin Suen	Telephone	
Title and Company			

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ \*Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

## ASSIGNMENT

This Assignment is made by Jenkin Suen, of 8795 Saunders Road, Richmond, British Columbia, V7A 2A6, Canada (the "Assignor") to Peak Innovations Inc., having a place of business at Suite 203 – 11782 Hammersmith Way, Richmond, British Columbia, V7A 5E2 (the "Assignee");

WHEREAS Assignor has invented a new and useful invention entitled **SCREW-IN POST SUPPORT**, for which a Patent Cooperation Treaty application has been filed under International Application No. PCT/CA2003/000021 and for which a Canadian Patent has entered National Phase under Application No. 2,456,464 (the "Invention");

WHEREAS, Assignor believes himself/herself to be the original, first and joint inventor of the Invention; and

WHEREAS, Assignee desires to acquire by formal, recordable assignment the entire worldwide right, title and interest in and to said Invention, said applications, and any utility patent, design patent, industrial design, design right, utility model or petty patent that may be granted for said Invention in Canada, the United States or anywhere else throughout the world;

NOW, THEREFORE, in consideration of the sum of Ten Dollars (\$10.00) and of other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Assignor, Assignor hereby sells, assigns and transfers to Assignee, the entire right, title and interest in and to said Invention, said application, and any utility patent, design patent, industrial design, design right, utility model or petty patent that may be granted for said Invention in Canada, the United States or anywhere else throughout the world, including the right to file foreign applications directly in the

name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.

Assignor represents and warrants that he has not granted and will not grant to any other any rights inconsistent with the rights granted herein.

Assignor authorizes and requests the Commissioner of Patents in Canada, the United States and of all foreign countries to issue any patent, utility patent, design patent, industrial design, design right or any subsequently filed division, continuation, continuation-in-part or reissue applications, to Assignee, its successors and assigns, as the assignee of the entire interest in said Invention.

IN WITNESS WHEREOF, Assignor has executed this Assignment on the date written hereinbelow.

Assignor:

Dated: \_\_\_\_\_, 2005

\_\_\_\_\_  
Jenkin Suen

Witness: \_\_\_\_\_

Witness name: \_\_\_\_\_

(printed)

## **TITLE OF THE INVENTION**

### **SCREW-IN POST SUPPORT**

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## **FIELD OF THE INVENTION**

The invention relates to the field of structural supports and in particular screw-in post supports.

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## **BACKGROUND OF THE INVENTION**

When building a structure such as a fence or deck, post supports can be used to simplify the construction process. Typically these post supports take the form of an open-top metal box section connected to a spike having vertically tapered blades. The spike may be hammered into the ground and the supported element, such as a fence post or deck support post are seated snugly in the metal box section where they are secured with bolts, screws, nails or the like. Because the post support is hammered into the ground, it is often difficult to ensure a proper vertical orientation. Removal of the post support may also prove difficult in such cases.

It is also known to replace the vertically tapered blades with a helical screw blade disposed only at the ground engaging end of the spike and providing a relatively longer spike. This allows the screw to engage the ground below the frost line. This arrangement allows the supported structure to remain stable despite the heaving due to frost and the loosening of the ground that occurs through the frost depth upon thawing. In such prior art, the box portion of the post support is replaced with a U-shaped member. This facilitates the manual or mechanical screwing of the spike into the ground as the U-shaped member allows the passage therethrough (laterally) of an elongated member or of an engagement

arm to allow manual or mechanical torquing of the post. The U-shaped member of the prior art is typically dimensioned to a standard size of dimensioned lumber, for example for 2 x 4 lumber. In the given example, a 2 x 4 piece of lumber may be extended through the U-shaped member to be used to manually apply torque to screw the post support into the ground. However, as the U-shaped member only has two sides, it is sometimes difficult to achieve proper centering of the post on the member prior to securing it.

It is also known to provide a post support with an extended helical screw blade affixed to a spike, which in turn is connected to an open-top four-sided metal box section, as taught in United Kingdom Patent Application No. GB2365455. In order to allow for the application of sufficient torque the post support of GB2365455 provides a circular hole centered in the faces of opposite sides of the metal box. A bar or the like may be threaded through the circular hole to aid in insertion or removal of the post support. While this design overcomes the deficiencies noted above, it requires the use of a specially shaped bar – one designed to fit in the circular hole – thereby adding to the expense of the system and providing an additional tool that must be stored. Furthermore, application of force against the edge of the walls bordering the circular hole can cause the circular wall to bend thereby distorting the shape of the box that is intended to receive a square post.

Accordingly, a need exists for an improved post support providing ease in installation and removal, and which overcomes the deficiencies noted above.

Other objects of the invention will be apparent from the description that follows.

### **SUMMARY OF THE INVENTION**

According to the present invention there is provided a post support for supporting a post above the ground. The support comprises a shaft having at least one helical blade thereon and a post-receiving box on one end of the shaft. The post-



Fig. 4 is an opposite perspective view of the box portion of the post support of the preferred embodiment.

## **DESCRIPTION OF THE PREFERRED EMBODIMENT**

### **OF THE INVENTION**

The preferred embodiment of the post support of the invention is illustrated in Figs. 1 to 4.

A shaft 12, has a helical blade 14 affixed thereto, preferably by welding. The blade is adapted to screw into the ground and is preferably disposed only at the ground-engaging end of the shaft. The ground-engaging end of the shaft 12 tapers to a point 13.

The shaft may be hollow and point 13 may be provided with an opening 16 defined by the wall of the shaft. Thus, when the shaft is inserted into the ground, soil may enter the hollow interior through opening 16. This allows for easier insertion of the shaft into the ground, as less soil must be displaced to create space for the shaft.

A post receiving box 20 is connected to the spike 12, preferably by welding the base 25 of the box to the spike 12. Box 20 has four side walls 22, 24, 26 and 28. Opposed side walls 22, 24 extend vertically from, and substantially perpendicular to, base 25. Side walls 26 and 28 each extend substantially between side walls 22 and 24, but the bottom edges 27 and 29 of side walls 26 and 28 are spaced from the base 25 a distance sufficient to accommodate a standard width of dimensioned lumber, for example at least 1 3/4" for 2 x 4 lumber. The spacing of the bottom edges 27 and 29 from the base 25 form rectangular slots 30, 32 through which dimensioned lumber may be inserted horizontally to torque the post support.

receiving box has a floor and four side walls oriented substantially perpendicular to the floor. Opposed first and second walls extend from the floor and opposed third and fourth walls extend generally between the first and second walls. The third and fourth walls have bottom edges that are spaced from the floor to define opposed rectangular slots in the box.

In a further aspect of the invention, the bottom sides of the slots are defined by said floor. Each slot is dimensioned to accommodate a standard sized cut of lumber.

In yet another aspect of the invention, there is also provided at least one pair opposed, parallel and spaced flanges extending outwardly from the first and third walls, said flanges being adapted to be drawn toward one another.

Other aspects of the invention will be appreciated by reference to the detailed description of the preferred embodiment and to the claims that follow.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

These preferred embodiment of the invention will be described by reference to the drawings thereof in which:

Fig. 1 is a front elevation of a post support according to the preferred embodiment of the invention, shown inserted into the ground;

Fig. 2 is a plan view of the post support of the preferred embodiment;

Fig. 3 is a perspective view of the box portion of the post support of the preferred embodiment; and,

Preferably, the base 25 and two of the side walls of the box are formed from a single piece of metal rather than being formed separately then welded, so as to minimize the risk of failure of such weld when applying torque to the box to screw the post support into the ground.

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Insertion of a piece of 2 x 4 lumber through slots 30 and 32 allows for application of sufficient torque to screw the post support into the ground 2. Because the post support is used in the construction of fences, decks and the like, a plentiful supply of such lumber should be available for use in screwing the post support into the ground. After the post supports have been put in place, the lumber used to screw in the post supports may be used in construction of the intended structure, burned or otherwise disposed of. Furthermore, because the force is applied against the broad interior surfaces of walls 22 and 24 near the base 25, and because walls 22 and 24 are otherwise joined together through wall 28, the edges of side walls 22 and 24 are not likely to bend inwards or otherwise distort when torque is applied.

Walls 24 and 28 further comprise flange portions 40 and 42 respectively, extending diagonally outward from a corner of box 20, substantially parallel to each other. Bolts 44 or the like may be inserted through holes (not shown) in each of flange portions 40 and 42. After a two by four is used to screw the post support the desired distance into the ground, a post is inserted into post receiving box 20 and bolts 44 may be tightened, thereby reducing the cross sectional size of the box 20 so as to hold the post firmly in place. It will also be appreciated that as a result of this flange tightening arrangement, side wall 26 strictly speaking does not extend between side wall 22 and side wall 24 but more precisely it extends between side wall 22 and the flanged opening between side wall 26 and side wall 24.

The size of the box 20, and the post support as a whole, may be varied in order to accommodate different standard sizes of dimensioned lumber. Preferably, the spacing between walls 22 and 24 and between walls 26 and 28 is chosen to

- correspond to standard widths of cut lumber, for example 3 and 1/2 inches to accommodate 4 x 4 lumber in the box. If the size of the box increases, so does the size of slots 30, 32. Preferably, lumber inserted into slots 30 and 32 shares similar dimensions as the slots in order to prevent excessive forces being placed on the outer edges of side walls 22 and 24. However, even if a smaller lumber piece, for example a two by four, were used in a larger sized opening, for example an opening sized for a two by eight, the resultant forces would not alter the effectiveness of the box 20.
- 10 The use of a substantially four-sided box provides reliable and complete support for the post, while the slots 30, 32 at the base of the box allow the insertion of a torquing element without the need for specialized tools and minimizing the risk of deformation of the box due to torquing.
- 15 It will be appreciated by those skilled in the art that the preferred and alternative embodiments have been described in some detail but that certain modifications may be practiced without departing from the principles of the invention.

## **CLAIMS**

What is claimed is:

- 5 1. A post support for supporting a post above the ground comprising:  
  
a shaft having at least one helical blade thereon;  
  
a post-receiving box on one end of said shaft;  
10 said post-receiving box having a floor and four side walls oriented substantially perpendicular to said floor;  
  
opposed first and second ones of said walls extending from said floor;  
15 opposed third and fourth ones of said walls extending generally between said first and second walls; and,  
  
said third and fourth walls having bottom edges that are spaced from said  
20 floor to define opposed rectangular slots in said box.
2. The post support of claim 1 wherein a bottom side of said slots is defined by said floor.
- 25 3. The post support of claim 1 or 2 wherein each of said slots is dimensioned to accommodate a standard sized cut of lumber.
4. The post support claim 1 or 2 wherein the first and second walls are spaced from one another a distance substantially equal to one dimension of a standard  
30 size of dimensioned lumber.

5. The post support of claim 1 further comprising at least one pair of opposed, parallel and spaced flanges extending outwardly from said first and third walls, said flanges being adapted to be drawn toward one another.

5 6. A post support for supporting a post above the ground comprising:

a shaft having at least one helical blade thereon;

a post-receiving box on one end of said shaft;

10

said post-receiving box having a floor and four side walls oriented substantially perpendicular to said floor;

opposed first and second ones of said walls extending from said floor;

15

opposed third and fourth ones of said walls extending generally between said first and second walls;

said third and fourth walls having bottom edges that are spaced from said floor to define opposed rectangular slots in said box, each of said slots being dimensioned to accommodate a standard sized cut of lumber; and

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at least one pair opposed, parallel and spaced flanges extending outwardly from said first and third walls, said flanges being adapted to be drawn toward one another.

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## **ABSTRACT**

A screw-in post support for use in supporting a post vertically above the ground. The post support has a four-sided post-receiving box mounted atop a shaft having  
5 a helical blade affixed thereto. Opposed rectangular slots are provided in two of the walls adjacent the floor of the box. The slots are dimensioned to allow the insertion of a rectangular piece of lumber in order to provide the necessary torque to screw the post support into and out of the ground. A pair of adjacent walls may be equipped with flanges that may be drawn toward one another to clamp the box  
10 around a post.